THE FIRE LINE

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THE FIRE LINE

Fond du Lac Fire/Rescue Monthly Newsletter

FOND DU LAC FIRE / RESCUE

FROM THE BALCONY

A message from Chief Peter O'Leary

A Special Kind of Airplane Charter

Last month I spent the day alongside some very skillful airmen who, at 26,000 feet showed how they make refueling fighter jets look easy, but there is nothing easy about it. I was part of the Wisconsin National Guard's "Boss Lift". Boss Lift is a program where guardsmen can nominate their boss to come spend a day learning about the function and mission of the Wisconsin Air National Guard. Master Sergeant Shawn Kneeland nominated me for this once in a lifetime opportunity and it was simply incredible!

We were originally scheduled to depart Truax Field in Madison with 115th Fighter Wing, but some last minute changes had our group moved to the 128th Air Refueling Wing located at General Mitchell International Airport. For 20 "bosses" we were oriented and given safety briefings before we went out to our "charter" which was a KC-135 tanker. The aircraft is massive and it's nothing like flying on a commercial aircraft. Once we were loaded on the plane, we all took up spots and just like Southwest there was no assigned seating. Through a lottery a couple lucky participants were able to ride up front and get a good look at takeoff and landing. We had two colonels flying the plane, one on loan from American Airlines and the other a career airman with the Guard.

Our flight mission was to fuel up several F-18 fighter jets who were deployed in exercises just over the border over Lake Superior in Minnesota. Once we got up to cruising altitude we were free to explore the entire aircraft. We each got a chance to lay down in the back of the plane next to the airman who would actually deploy the equipment to fuel the fighter jets when they approached. As we got into position and were ready to fuel the jets, I was positioned next to the boom operator who skillfully maneuvered the refueling boom and made connection flawlessly to the F-18. It was incredible knowing both planes were traveling in excess of 500 M.P.H. and in midair were able to refuel. The "boomers" were easy to talk to and appeared to really enjoy talking about their service.

I was then able to approach the flight deck and stand directly behind the pilots as they continued to maneuver the plane to the proper positions for the exercise. In the cockpit and in back, airmen relied on good strong communications, training and reference to checklists which helped to ensure all procedures were being followed. Each and every time the boom operator gets ready to deploy the refueling arm he/she goes to the checklist and makes certain all steps are followed. The exercise mirrored an actual combat mission (minus a plane of civilians).

After nearly three hours of flying, we were back in Milwaukee and had a chance to ask more questions during our debriefing. I was in complete awe by the time we landed further strengthening my respect and gratitude for our military. The military treats its National Guardsmen and Reservists as equal partners to enlisted members. Their uniforms are the same, training the same and they proved to me (and others in attendance) just how valuable they are.

Until Next Month, Be Safe and Be Well

INSIDE THIS ISSUE:

UPCOMING TRAINING AND EVENTS

Open House—
Fire Prevention Week
October 9th

Fire is Everyone's Fight™

Fond du Lac Fire Rescue Operations

By: Assistant Chief Erick Gerritson

Higher Education: Career Mastery Is a Matter of Choice

Over the next two months, I have dedicated my portion of the newsletter to the subject of professional development. ***Michael McCabe*** *of Firehouse explains two valid sub-categories which are "Professional Development Influencers" and "The Pillars of Professional Development." This month we will explore the influencers and in November we will conclude with the pillars.*

The direction our lives take is the result of the choices we make. Choices usually occur in the moment, yet their rewards and consequences continue throughout our lifetime. Our choices are influenced by our experience, education, culture, friends, enemies, attitude and aptitudes. Opening one's self to any possibility, at any given time and under any given circumstances will cause us to either choose based on gut feeling, past experience or qualified data. Before you do the next thing you do, consider the results: Will it help or will it hurt? Is it ethical? Is it legal?

The path ahead

Our emergency services mission—to save lives and property in the safest, most efficient operation—depends on a personal commitment to professional development. A personal obligation to life-long learning means more than digging out the books and updating the résumé when a promotion opportunity arises. Our duty to provide the best service arises with each call, each training session and in all of the daily tasks we accomplish.

Remember that as an emergency responder, we are always one injury or one decision away from a potential career change. How will you provide for yourself and your family if the change is due to a negative choice? How will you respond? Are you preparing yourself by seeking out new learning opportunities, shadowing your mentors or perusing new inspiration?

The U.S. Fire Administration deputy administrator often poses this scenario: How would you answer your child when they come to you and ask, "How do you become a doctor or lawyer?" The simple answer is: four years in college (medical/law school), several years in internship and residency practice, and then usually a state certification exam.

But what if your child asks how to become a fire chief? At present there is no simple answer. However, a scan of fire chief employment announcements reveals a national trend to hire those with advanced degrees in addition to the National Fire Academy Executive Officer Program (EFOP) and the Center for Public Safety Excellence (CPSE) Fire Officer Designations. In some localities, some level of higher education is also included as a part of the basic firefighter application qualification.

We all know personnel who are great tacticians who we would follow into any emergency, but would we allow them to balance our checkbook? We also know people who are great politicians and business leaders who could charm the socks off a snake, but would we expect them to command a dumpster fire? Remember, in larger departments where chief officers do not respond to all incidents, when you put on that fourth or fifth bugle, you cease to be a hands-on firefighter and require a different skill set to become a master business leader. We train to drag hose, lift ladders and apply bandages. But we must become educated in politics, budgets and human workforce development to become a successful manager.

Fond du Lac Fire Rescue Operations

By: Assistant Chief Erick Gerritson

Higher Education: Career Mastery Is a Matter of Choice, Cont.

Professional development influencers

There are several factors that impact the road to professional development, all of which apply to any firefighter, regardless of rank or role.

Attitude: Attitude plays a large part in the mental organization and general behavior of the individual. Your emotional state is one of the largest influencers of your readiness to learn and grow. It directly impacts your motivation to learn and participate. A positive attitude opens your mind for active engagement. Boredom, negative emotions and apathy limit our ability to immerse ourselves in the learning process. Feelings are the manifestations of both biological and cognitive processes working together. Feelings determine why we cry and why we laugh, successfully creating opportunities for creating meaning in the context of the learner's experience. Learning does not happen without the ability to create meaning or internalize the content we are studying.

Aptitude: The terms intelligence, ability and aptitude are often used interchangeably. Aptitude is inborn potential to do certain kinds of work whether developed or undeveloped. Ability is developed knowledge, understanding, learned or acquired abilities (skills) or attitude. The innate nature of aptitude is in contrast to skills and achievement, which represent knowledge or ability that is gained through learning.

Inspiration: The inspired person is inherently driven by the work or learning itself. It is a contagious, fleeting moment of clarity found in achievement, for example a successful rescue, which has a tendency to raise the sense of possibility in others, like a child who dreams of becoming a firefighter. Then the one who is inspired performs their own achievements and inspires others, and so on down the line.

Inspiration makes us feel alive in the moment, both humbled and self-confident, surrendering and also powerful. But it is a self-satisfying, brief moment that drives us on to the next act or the next experience that will help us regain that feeling of fulfillment.

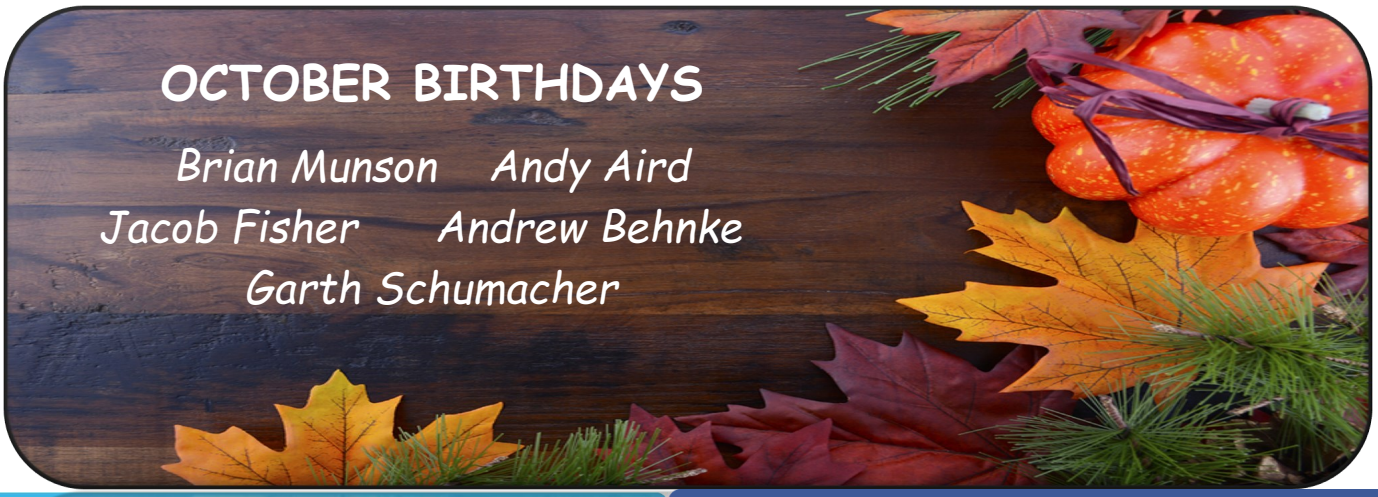
Environment: One of the factors that affect the efficiency of learning is the condition in which learning takes place. This includes the classrooms, textbooks, equipment, school supplies and other instructional materials. Learning is facilitated by the law of readiness or mindset. Learning does not occur unless the learner is ready to act or to learn. When a person is mentally and emotionally ready to learn, they learn more effectively and with greater satisfaction than when unprepared. When a person is ready to act and is prevented from doing so, they feel annoyed, bored, lost and/or confused. A positive mental mindset is conducive to effective learning. Effective learning takes place in environments that provide distraction-free comfort and both physical and psychological safety.

Stay tuned for next month, Part 2, when we will explore the Pillars of Professional Development.

Until then, Stay Safe!!

OPERATIONS BY THE NUMBERS

AUGUST	*THIS MONTH*		*YEAR–TO–DATE*	
PREVENTION	LAST YEAR	THIS YEAR	LAST YEAR	THIS YEAR
Total Inspections	275	163	2044	2059
Total Defects	409	122	2525	1427
SUPPRESSION				
Alarms Involving Fire	15	6	82	98
Fire Mutual Aid Given	1	0	10	11
Fire Mutual Aid Received	0	0	0	0
Service/Good Intent Calls	37	38	298	364
False Alarms & False Calls	33	37	199	204
Other Calls	17	29	122	115
Total Fire Alarms & Calls	102	110	701	781
EMS				
Total Ambulance Calls	480	540	3875	4047
Total Fire & Ems Responses	582	650	4576	4828
Fire Property Loss	$8,150.00	$115,750.00	$130,145.00	$345,165.00
Fire Contents Loss	$1,750.00	$36,000.00	$104,860.00	$141,260.00
Engine Assisted EMS Calls	228	245	1774	1727



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At City of Fond du Lac Fire/Rescue

The Code Summary

By: Todd Janquart
Assistant Chief of EMS

Seven Tools Result in Dramatic Improvements in Cardiac Arrest Outcomes in Rialto, California: Part 1

The treatment of cardiac arrest is changing. Nationwide, EMS has a dismal record of resuscitating cardiac arrest victims. Here in Fond du Lac, we are well above the national average as we have incorporated a few new initiatives that have demonstrated an increase in success. Compressions only CPR and mechanical CPR are two of the biggest changes that we have seen recently. Research is currently showing that uninterrupted, high quality CPR is significant factor in resuscitation. Rialto Fire Department in California has taken a few steps further and has drastically changed the way they treated cardiac arrest victims based on existing research. While their sample size is small, some of the results they are seeing may just prime the pump on improvements in the way we treat cardiac arrest victims. The article below outlines their initiatives and how it may be a game changer with cardiac arrest.
This is article 1 of 2:

In the United States, an estimated 10% of cardiac arrest patients survive, with 90% never leaving the hospital. Are these acceptable cardiac arrest survival rates where you and your family live, work and play? They weren't for the Rialto (Calif.) Fire Department (RFD), so the RFD embarked on a complete review and revision of their approach to cardiac arrest resuscitation.

This article describes the RFD's journey toward increased sudden cardiac arrest (SCA) survival- a journey that, in 2016, resulted in a 71% (Ulstein) survival rate from SCA in Rialto. This is due in large part to what the RFD unlearned about cardiac arrest; Rialto's outcome-based data now shows that all of these assumptions are ***false:***

* CPR should be done a hard, flat surface;
* Always defibrillate ventricular fibrillation (v fib);
* Intubation attempts should be limited to 30 seconds;
* ALS actions are what saves lives;
* Prioritize epinephrine to improve cerebral perfusion and survival;
* Asystolic patients have essentially no survivability, and
* Rapid transport to the hospital improves outcomes.

After just two years, the RFD is seeing dramatic results, including a significant improvement of return of spontaneous circulation (ROSC) and patient survival. The RFD's mission is to be, "An organization that brings value to the community, measured in lives saved and quality of life protected." To further this, the RFD embarked on a journey to improve neurologically intact survival from SCA.

The RFD enjoys an organizational structure that isn't common in California. The RFD is both the fire-based first responder and the ambulance transport provider for the city of Rialto.

All RFD first responder and transport units are staffed with paramedics and all RFD personnel are trained to the same standards. The RFD doesn't participate in the CARES registry and acquiring outcome data depends upon extending the RFD culture of teamwork to receiving facilities.

The Code Summary

By: Todd Janquart
Assistant Chief of EMS

Dramatic Improvements in Cardiac Arrest Outcomes, Cont.

Rialto's Toolkit

In 2016, the RFD developed the seven components of cardiac survivability, referred to as the RFD Cardiac Survivability Tools:

1. Continuous uninterrupted compressions utilizing an automated CPR device;
2. Apneic oxygenation;
3. Use of an impedance threshold device (ITD);
4. Heads-up CPR;
5. Delaying defibrillation for a certain subset of patient presentations;
6. Expanded utilization of waveform capnography;
7. Deprioritizing epinephrine in the order of interventions.

When applying the RFD Cardiac Survivability Tools to cardiac arrest patients, the RFD realized a 60% return of spontaneous circulation (ROSC) for all non-traumatic adult arrests; not just the very small number of patients that fit into the Utstein measurement, but all patients in cardiac arrest. By working hard at this process and unlearning previous assumptions, the RFD gleaned some keys to success.

Uninterrupted Compressions

If the RFD could impart only one data-driven, outcome-oriented finding, it's this: nothing trumps compressions, *nothing*! Not ALS (Advanced Life Support) or BLS (Basic Life Support), airway or venous access, defibrillation or definitive medical care; *nothing should interrupt compressions*. Uninterrupted compressions have been shown to be one of the key components to saving lives, so everything else should be support for those compressions.

The RFD has been using the AutoPulse automated CPR device since 2009. The generalized research on automated CPR devices hasn't shown significant benefit in patient outcomes with their use. Research conducted in 2015 illustrated ROSC rates to be 5% higher for all non-traumatic adult cardiac arrest patients in Rialto with use of automated CPR vs. manual CPR. However, it was when evaluating the use of automated CPR devices that the RFD had its first eureka moment - a moment that would set the stage for the data-driven, outcome-oriented cardiac survivability tools that would follow.

The RFD was using automated CPR in the same fashion it had previously used manual CPR-with too many pauses in compressions. Today, the RFD goal is to initiate and maintain continuous, uninterrupted compressions as soon as possible after patient contact, effectively maintaining a 100% compression fraction rate within the first 30 seconds of the resuscitation.

In practice, RFD crews will initiate manual CPR, transition to the AutoPulse device within 30 seconds and then never turn off the device; not for intubation, defibrillation, rhythm checks or pulse checks.

Under RFD's cardiac arrest protocol, the automated CPR device can only be turned off for two reasons: termination of resuscitation efforts or if ROSC is achieved, as noted by a precipitous and persistent increase in end-tidal carbon dioxide ($EtCO_2$).

To ensure compliance with the Cardiac Survivability Tools, the RFD uses software (ImageTrend ePCR report writer and ZOLL Case Review) to review all sudden cardiac arrests. Each compression, ventilation and all vitals are represented for the duration of the resuscitation in the program.

The Code Summary

By: Todd Janquart
Assistant Chief of EMS

Dramatic Improvements in Cardiac Arrest Outcomes, Cont.

Those patients that achieve ROSC share an extended period of uninterrupted high-quality CPR as the underlying factor. Although patients in shockable rhythms generally achieve ROSC as a result of defibrillation, those who achieve ROSC from non-shockable rhythms generally have no discernable causal intervention other than the absence of breaks in CPR for several minutes prior to ROSC.

Apneic Oxygenation

For years, paramedics have been taught that 30 seconds is all the time they have to establish an advanced airway, or the intervention should be delayed and a round of pre-oxygenation ventilations should be instituted. Apneic oxygenation allows for passive oxygenation of a patient that's already receiving continuous, uninterrupted compressions, capitalizing on the low tidal volume but high minute volume of ventilations generated by the automated CPR device.

The RFD goal for this survivability tool is to initiate and maintain continuous oxygenation of patients from the time that continuous, uninterrupted CPR by automated CPR device is initiated until an advanced airway is secured. In practice, crews place a nasal cannula on the patient at 15 liters per minute immediately after initiating the automated CPR device. Providers can readily assess the effectiveness of apneic oxygenation through the use of pulse oximetry. The patient should maintain or improve their oxygen saturation and $EtCO_2$ levels even when providers aren't ventilating the patient to secure an advanced airway.

Applying this tool supports the entire process by avoiding interruption of CPR to secure an advanced airway and eliminates arbitrary time standards to secure the advanced airway based on the need to maintain patient oxygenation.

Regulating Intrathoracic Pressure

The RFD uses the ResQPOD ITD, a noninvasive device that delivers intrathoracic pressure regulation (IPR). The ITD acts as a one-way valve allowing oxygen to be delivered during ventilations but restricts ambient air from entering the thoracic cavity during the recoil phase of chest compressions and between ventilations. This lowers thoracic pressure, creating a vacuum which pulls more blood back to the heart, increases preload and decreases intracranial pressure (ICP), allowing for quality cerebral perfusion. It's a blood in, blood out equation. Studies have shown that the ITD increases blood flow to the heart by 25% and increases cerebral perfusion by 50%.

The RFD goal for this survivability tool is to increase cardiac and cerebral perfusion by initiating and maintaining the use of the ITD from the time an advanced airway is secured until ROSC is achieved. In practice, crews place the ITD inline of the ventilation circuit immediately after verifying placement and security of the advanced airway.

The RFD hasn't found a definitive indicator that the ITD is providing increased circulation. However, for patients who subsequently achieve ROSC, there's generally noted improvement in $EtCO_2$ from the time of ITD placement. This improvement in $EtCO_2$ occasionally occurs rapidly and, in several cases, has precipitated ROSC without additional intervention.

End of Part 1, Part 2 next month!

Fond du Lac Fire/Rescue Receives Charitable Donation from The Oberreich Foundation

Pictured in the presentation photo are from left to right; Roger Zuleger- Foundation, Division Chief Troy Haase, Chief Peter O'Leary, Richard Slate- Foundation President.

Fond du Lac Fire/Rescue was awarded a donation from the Oberreich Foundation to purchase a new Fire Education House. The new Inflatable Fire Education House was designed as an alternative to the Fire Education Trailer to be used with our Survive Alive Program. It was designed to offer a realistic fire education experience for children from Kindergarten through 5th grade. The three rooms in the Survive Alive House allow for instructions on fire safety in the kitchen, living room, and bedrooms. At the back of the house there is a crawl through tunnel that simulates smoke rising so kids can be instructed on exiting the house if there is a fire.

Fond du Lac Fire/Rescue wants to thank the Oberreich Foundation Board for their commitment to the children of this community with this very appreciated donation. The Oberreich Foundation provides grants to nonprofit organizations that support strong cohesive families by assisting in educational and recreational programs.

Engineer Rick Gerritson is explaining the fire safety tips to the children.

Roast with Care!

If roasting marshmallows, help young children. Never shake a roasting marshmallow. It can turn into a flying, flaming ball. A heated metal skewer can cause burns.

Fact:

Campfire accidents send thousands of people to emergency rooms with burn injuries every year.

Well trained people are the best defense against fire.

By: James Knowles III
Assistant Chief Training/Safety

How to Respond to Natural Gas Emergencies

Firefighters and other emergency personnel routinely respond to emergencies involving natural gas. Such emergencies can include residential fires, odors or leaks in buildings, damaged gas lines or, worst case scenario, an explosion with ensuing fire. Often, emergency responders arrive on scene before the utility company and begin efforts to secure the area. A basic knowledge of natural gas and how to eliminate or control hazards can streamline emergency operations and, more importantly, ensure the safety of all personnel on scene and the community they serve.

September 12th – 14th, 2018 Alliant Energy provided a natural gas emergency presentation and training session to a variety of members from the City of Fond du Lac and County Law Enforcement. The purpose of the presentation was to bring everyone to a level understanding and approach to when a natural gas leak would occur for personnel safety, provide knowledge for incident action plan considerations, and to build upon a great working relationship with the various organizations that assist with a scene mitigation. The field training / live-burn session included the members from Fire / Rescue reviewing basic hose line tactics during a natural gas leak having direct impact on a property or when crews need to effectuate a rescue adjacent to a leak site. The following information provides information pertaining to the Alliant Energy presentation.

About Natural Gas

Predominately methane, natural gas is colorless, tasteless and, in its natural state, odorless. Transmission pipeline and utility companies add a distinctive odorant, butyl mercaptan, to natural gas so leaks can be quickly and easily identified. Natural gas is lighter than air and tends to rise, while most other flammable gases have higher vapor densities and tend to move downward.

Natural gas is non-toxic and considered a simple asphyxiant. Utility companies indicate that the natural gas mixture from the pipeline will typically have a lower explosive/flammable limit (LEL/LFL) of 4% and an upper explosive/flammable limit (UEL/UFL) of 15%, or a flammable range of 4–15%.

Natural gas typically originates in underground deposits and is extracted in a number of ways. Energy companies have developed alternative processing methods to create natural gas, and currently there is a boom in natural gas in North America that has reduced gas prices and encouraged its use. Transmission pipelines transport the natural gas at pressures of up to 1,500 psi throughout the country to local natural gas distributors.

Gas distribution systems operate at pressures ranging from 0.25–99 psi and consist of mains, services, valves and meters that are constructed of steel, cast iron, ductile iron, wrought iron or plastic, depending on the system age and type of service.

Natural gas transmission and distribution piping system installations must conform to rigid construction requirements set forth in ANSI B31.8, Gas Transmission and Distribution Piping System Standard. NFPA 54, the National Fuel Gas Code, contains requirements for the installation of natural gas piping and appliances inside of buildings. The U.S. Department of Transportation (DOT) maintains jurisdiction over the safety of transmission pipelines, and distribution systems must comply with DOT regulations, along with any public utility commission requirements.

Utility companies must ensure the integrity of their natural gas distribution systems through a comprehensive safety program that involves surveying, monitoring, maintenance and testing. Most utility companies are responsible for the entire distribution system, including the natural gas meter. Property owners are responsible for all natural gas piping inside buildings downstream of the meter. Many rural and suburban areas don't have piped natural gas service. In these areas, the gas service may be bottled gas, such as liquid propane gas (LPG). The information contained in this article doesn't apply to LPG. Fire departments should be aware of where there is natural gas service in their coverage areas.

Well trained people are the best defense against fire.

By: James Knowles III
Assistant Chief Training/Safety

How to Respond to Natural Gas Emergencies, cont.

Here are some tips for handling incidents involving natural gas:

IN GENERAL

After determining an incident involves natural gas, immediately notify the utility company. Once they arrive on scene, instruct utility company personnel to report to the incident commander (IC) or the liaison officer. Many utility workers receive incident command system (ICS) training to work within the emergency response operation and can assist in evaluating the problem, recommend actions to take and request additional resources as needed.

Gas Detection

When dispatched to investigate a gas odor, notify the utility company immediately. Utility company employees are well trained and Responding crews must attempt to identify the type of gas causing the odor and the source of the leak. Gas meters that are setup to read LEL should be used to determine where the hot zone is. Firefighters must be familiar with how these meters work and realize that any LEL reading on a meter (or the distinctive odor of gas) indicates the presence of gas and the potential for a hazard to exist. Meters must be calibrated regularly to be effective, and at a gas incident, if the fire department doesn't have a meter, they need to know where to get one and have it brought to the scene. To verify readings, try to use two meters instead of one.

Escaping Natural Gas Outside a Building

Notify the utility company immediately if un-ignited natural gas is escaping from the ground from an excavation or from an open pipe outside a building. Establish a hot zone around the location of the leak. This hot zone should include any area where gas detection equipment indicates a reading of 1% or more.

Extinguish all flame and other ignition sources within this hot zone. Be aware that any electrical equipment—including that which is brought to the scene by the fire department—presents a possible ignition source if not rated for flammable atmospheres. Turning electrical equipment on or off can create a spark and ignite leaking gas. Check surrounding buildings for any presence of natural gas odors. Reroute and restrict vehicular and pedestrian traffic from entering the area until utility company personnel bring the natural gas flow under control. If the leak continues, the hot zone must be continuously monitored and may need to expand.

Natural Gas Burning Outside

When natural gas is burning, notify the utility company immediately. Only utility company personnel should operate valves on mains. However, emergency responders trained in the use of curb keys may close curb valves on natural gas services, but they should never turn on valves or curb valves. Restoration of gas service requires re-ignition of pilot lights, checking safety equipment associated with burners and other tasks that require specialized training. Once something is shut off, leave it off. Turning the wrong valve or opening a closed valve could further endanger life or property. Leave these actions to utility company personnel.

The best method to control an outdoor natural gas fire is to shut off the natural gas flow. In most cases, emergency responders should not attempt to extinguish the fire while gas continues to escape, as an explosion could result. Establish and maintain a hot zone. If the natural gas fire has spread to exposed combustibles, a hose stream or extinguisher can be used to extinguish the exposed fires, using care not to extinguish the gas fire itself.

Do not fill an excavation where gas is leaking with water, as water could enter the gas main system. If it proves necessary to extinguish a natural gas fire before gas flow can be stopped, then use dry chemical. Do this only as a last resort because escaping unburned gas creates the potential for explosion.

For an uncontrolled gas leak with no ignition, evacuate everyone—including firefighters—from the immediate area.

Escaping Natural Gas in a Building

When escaping natural gas is found in buildings, notify the utility company immediately. Clear the building of occupants. The IC should determine if the natural gas can easily be shut off inside the building without risk to personnel, or if it must be shut off at the outdoor meter, which should be equipped with a valve that can be shut off with a wrench.

Well trained people are the best defense against fire.

By: James Knowles III
Assistant Chief Training/Safety

How to Respond to Natural Gas Emergencies, cont.

It may prove hazardous for firefighters to enter a building to shut off the gas inside. Ventilate the building by opening the doors and windows. Do not operate any electrical switches, phones or other equipment that could create sparks (including non-intrinsically safe radios and ventilation fans) in the hot zone. When ventilating a building above the flammable range, firefighters may bring the atmosphere down into the flammable range, which could result in an ignition. Do not be complacent if gas readings are high.

Natural Gas Burning In Buildings

When escaping natural gas is burning in buildings, the IC should notify the utility company immediately and determine if the gas can be shut off inside the building or must be shut off at the outdoor meter.

In certain industrial or commercial buildings, turning off the natural gas might seriously interrupt important and costly processes, or create further hazards. The utility company and facility management can help determine the proper action. If the natural gas supply can't be safely shut off, prevent fire extension by wetting surrounding combustibles with a fog stream until utility company emergency crews can control the burning flow of natural gas.

Quick Guide for Natural Gas Emergencies:

- Immediately notify the utility company
- Isolate and eliminate potential ignition sources
- Evacuate the area
- Meter the immediate area & gas migration areas
- Establish a hot zone (explosion and collapse)
- Ventilate the building if appropriate
- Establish rapid intervention crews

Indoor Natural Gas Piping or Meters

Notify the utility company immediately when a fire endangers indoor natural gas piping or a meter. The utility company is best equipped to shut off the supply of natural gas. The on-scene IC may elect to shut off the supply at an inside valve, if it can be done safely.

Appliance Fires

In some rare cases, natural gas may burn out of control from an appliance. Notify the utility company when a natural gas fueled appliance is involved in fire. You can typically control the fire by shutting off the gas flow at the appliance shut-off valve, if it can be safely accessed, or at the meter valve. Prepare to check for exposure fires behind and above the burning appliance. Do not turn on the appliance or meter valve once turned off.

Gas in Manholes, Vaults, Sewers

Various types of gas from a variety of sources can be found in sewers: natural gas, propane, gasoline, sewage and electrical cable burnout. The utility company can help identify the type of gas involved and trace its source.

Do not attempt to extinguish any of these flames if gas becomes ignited. Establish a hot zone around the opening and keep vehicles and bystanders away from nearby manhole covers. Prohibit smoking and other potential sources of ignition.

Before anyone enters, always test the atmosphere of a manhole, vault or sewer, first for oxygen levels and then for flammable gases, carbon monoxide and hydrogen sulfide. Firefighters should not enter manholes, vaults or sewers—leave that to utility personnel. No one should enter a manhole if dangerous concentrations of gases or vapors are known or suspected, and if personnel enter, they must follow specific confined-space entry procedures.

Temporarily vent a manhole by removing its cover and the covers on either side until you reach manholes free of gas. Perform actions to prevent sparks, such as wetting the manhole cover and rim before removing the cover and avoid working directly over the cover.

Check the basements of adjoining buildings for any evidence of gas intrusion. If found, ventilate by opening windows and doors. Shut off open flame devices, and don't operate any electrical switches. If natural gas is involved, handle as suggested in the section on escaping gas in buildings.

In Summary

When under control, natural gas, like many other hazardous materials, is as harmless as it is widespread. In addition to many residential and commercial purposes such as heating and air-conditioning, water heating, cooking, drying and power generation, natural gas is widely used in industrial settings every day. But how we respond to natural gas emergencies can mean the difference between life and death for civilians as well as emergency responders. It's critical that meters are properly maintained and calibrated, personnel are properly trained in their use and standard operating guidelines for response to gas emergencies exist.

FIRE PREVENTION WEEK

OPEN HOUSE

Date: Tuesday, October 9, 2018

Time: 4:30 p.m. to 6:30 p.m.

Location: Fond du Lac Fire/Rescue
815 S. Main Street, Fond du Lac

Join us for:

- Station & Vehicle Tours
- Live Burn
- Water Games
- Flight For Life
- Fire Prevention Activities

2018 Fire Prevention Week Theme

"LOOK. LISTEN. LEARN.

Be Aware. Fire Can Happen Anywhere."

Proclamation

Whereas, *home fires are a serious public safety concern, both locally and nationally, and are where people are at greatest risk from fire; and*

Whereas, *U.S. fire departments respond to an average of 358,500 home structure fires each year; last year those fires resulted in 12,300 civilian injuries and 2,510 civilian deaths; and*

Whereas, *smoke alarms and a well-practiced fire escape plan provide a tool and skill set to quickly and safely escape a home fire situation; and*

Whereas, *the 2018 Fire Prevention Week theme,* ***"Look. Listen. Learn. Be aware. Fire can happen anywhere."****, effectively serves to educate the public about three basic but essential steps to take to reduce the likelihood of having a fire and how to escape in the event of one; and*

Whereas, *residents shall* ***"LOOK"*** *for places a fire could start; take a good look around your home and identify potential fire hazards and take care of them; and*

Whereas, *residents shall* ***"LISTEN"*** *for the sound of the smoke alarm; you may have only minutes to escape safely and reach your outside meeting place, which should be a safe distance from the home, once the alarm sounds; and*

Whereas, *residents shall* ***"LEARN"*** *two ways out of every room and make sure all doors and windows leading outside open easily and are free of clutter; and*

Whereas, *Fond du Lac Fire/Rescue is dedicated to reducing the occurrence of home fires and home fire injuries through prevention and protection education to assist our residents in taking personal steps to increase their safety from fire, especially in their homes.*

Now, Therefore, *I, Karyn Merkel, President of the Fond du Lac City Council, by my signature affixed, do hereby proclaim October 7-13, 2018, as Fire Prevention Week and urge all residents of our City to look, listen, and learn how to prevent a home fire and escape to a safe place in the event of one.*

Dated: September 2018

Karyn Merkel
City Council President

FIRE PREVENTION ....

That's what it's all about!

By: Troy Haase
Division Chief of Fire Prevention

Fire Prevention Week 2018

LOOK: For places fire can happen and address the problems.

The kitchen:

- Cooking is the leading cause of home fires and home fire injuries. The leading cause of fires in the kitchen is unattended cooking. Stay in the kitchen when you are frying, boiling, grilling, or broiling food.
- If you are simmering, baking, or roasting food, check it regularly and stay in the home.
- Keep anything that can catch fire away from your stovetop.

Heaters:

- Heating equipment is one of the leading causes of home fires during the winter months.
- Space heaters are the type of equipment most often involved in home heating equipment fires.
- All heaters need space. Keep anything that can burn at least 3 feet (1 meter) away from heating equipment.
- Have a 3-foot (1-meter) "kid-free zone" around open fires and space heaters.
- Purchase and use only portable space heaters listed by a qualified testing laboratory.
- Have a qualified professional install heating equipment.
- Maintain heating equipment and chimneys by having them cleaned and inspected by a qualified professional.

Electricity:

- All electrical work should be done by a qualified electrician.
- Only one heat-producing appliance should be plugged into a receptacle outlet at a time.
- Extension cords shouldn't be used for permanent use.
- Electrical cords are checked to make sure they are not running across doorways or under carpets.
- Light fixtures use light bulbs that have the correct number of watts.

FIRE PREVENTION ....

That's what it's all about!

By: Troy Haase
Division Chief of Fire Prevention

Fire Prevention Week 2018, cont.

LISTEN: Know the sound of the smoke alarm.

- A working smoke alarm will let you know if there is a fire. Fire moves fast. You could only have minutes to get out safely once the smoke alarm sounds.
- Make sure everyone in your home knows the sound of the smoke alarm and understands what to do when they hear it.
- Children, older adults, and people with disabilities may need assistance to wake up and get out. Make sure someone can help them. When the smoke alarm sounds, get out and stay out.
- Go to your outside meeting place. Call 9-1-1.
- Never go back inside for people, pets, or things. Smoke alarms and alert devices are available for people who are deaf or hard of hearing.
- Strobe lights flash on these devices when the smoke alarm sounds. The lights warn people of a possible fire.
- When people who are deaf are asleep, a pillow or bed shaker can wake them so they can escape. The shaker is activated by the sound of a smoke alarm.
- When people who are hard of hearing are asleep, an alert device that uses a loud, mixed, low-pitched sound can wake them. They may find a pillow or bed shaker helpful. These devices are triggered by the sound of the smoke alarm.

LEARN: Two ways out of every room.

- Make a home escape plan with all household members. Draw a map of each level of the home, showing all doors and windows. Make sure you have two ways out of every room.
- Practice day and nighttime home fire drills.
- If you live in a high-rise or condo, talk to the building manager about the evacuation plans. If smoke or fire is blocking one of your exits, use your second exit to escape to safety.
- When you enter a building you should look for all available exits. Some exits may be in front and some in back of you.
- Be prepared to use your closest exits. You may not be able to use the main exit.
- Make sure aisles are wide enough and not blocked by chairs or furniture.
- Check to make sure your exit door is not blocked or chained.
- If there are not at least two exits or if exit paths are blocked, report the violation to management and leave the building if it is not immediately addressed.

Source: National Fire Protection Association, Fire Prevention Week Campaign Materials.

FIRE PREVENTION ....

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Current Status of New Construction

- Combined Building Apartments at 104 S. Main Street- Building is occupied and nearly complete.
- The Brickhouse at 161 S. Main Street - Building is under construction.
- Mercury Marine at 600 West Pioneer Road- Building and guard shack are under construction.
- CD Smith Corporate Offices on Camelot Drive- Building is under construction.
- Faith Lutheran School Addition at 55 Prairie Road- Building is under construction.
- Beacon House at 166 S. Park Avenue- Building is under construction.
- Mid-States Aluminum at 132 Trowbridge Drive- Building is under construction.
- Fond du Lac High School at 801 Campus Drive- Building is under construction.
- Glacier Hills Credit Union at 608 W. Johnson- Building is under construction.
- Mid-States Aluminum at 132 Trowbridge Drive- Building is under construction.
- Ahern-Gross at 218 South Main Street- Building is under construction.
- The Church of Jesus Christ of Latter Day Saints at 347 Country Lane- Building is under construction.

- Fond du Lac Humane Society at 652 Triangle Road- Building is under construction.
- Menards at 1200 Rickmeyer Drive- Building is under construction.
- River Hills Mixed Use Development on S. Main Street- Buildings 1 & 2 & 3 & 4 are complete 5 & 6 are under construction.

Be Halloween Safe

Halloween is a fun, and spooky, time of year for kids. Make trick-or-treating safe for your little monsters with a few easy safety tips.

HALLOWEEN FIRE SAFETY TIPS

- **When choosing a costume**, stay away from long trailing fabric. If your child is wearing a mask, make sure the eye holes are large enough so he or she can see out.
- **Provide children** with flashlights to carry for lighting or glow sticks as part of their costume.
- Dried flowers, cornstalks and crepe paper catch fire easily. **Keep all decorations** away from open flames and other heat sources like light bulbs and heaters.
- **Use a battery-operated** candle or glow-stick in jack-o-lanterns. If you use a real candle, use extreme caution. Make sure children are watched at all times when candles are lit. When lighting candles inside jack-o-lanterns, use long, fireplace-style matches or a utility lighter. Be sure to place lit pumpkins well away from anything that can burn and far enough out of the way of trick-or-treaters, doorsteps, walkways and yards.
- **Remember** to keep exits clear of decorations, so nothing blocks escape routes.
- **Make sure** all smoke alarms in the home are working.
- **Tell children** to stay away from open flames including jack-o-lanterns with candles in them. Be sure they know how to stop, drop and roll if their clothing catches fire. (Have them practice, stopping immediately, dropping to the ground, covering their face with hands, and rolling over and over to put the flames out.)

If your children are going to **Halloween parties** at others' homes, have them look for ways out of the home and plan how they would get out in an emergency.

Did you know?

Decorations are the first thing to ignite in **900** reported home fires each year. Two of every five of these fires were started by a candle.

Your Source for SAFETY Information
NFPA Public Education Division • 1 Batterymarch Park, Quincy, MA 02169

